

**Claims**

1. A wound covering (10), comprising a first layer formed by an absorbent matrix (12) and an anti-microbially active substance, the substance being present chemically or physically bonded to one surface of the matrix (12), the surface of the matrix including the substance being coated with a hydrophilic polymer, the wound covering (10) comprising a second layer formed by a gas-permeable but liquid-impermeable film (14) connected to the matrix (12) and having a self-adhesive first area (16), the matrix (12) being connected to the film (14) in a second area (17) and the first area being an area of the film (14) which surrounds the second area (17), it being possible to stick the wound covering (10) to human or animal skin by means of the self-adhesive first area, a liquid-tight inner space which can be filled with a liquid comprising the matrix (12) being formed, the substance being a metal or a metal compound.
2. The wound covering (10) as claimed in claim 1, the matrix (12) having at least one fiber or being formed from at least one fiber and the surface of the matrix (12), to which the substance is bound, being a surface of the fiber.
3. The wound covering (10) as claimed in one of the preceding claims, the substance being bound exclusively to the surface of the matrix or fiber.
4. The wound covering (10) as claimed in one of the preceding claims, the substance being selected from a group consisting of silver, copper and zinc, or a mixture of silver, copper and zinc, or a mixture or alloy comprising at least one of these components.
5. The wound covering (10) as claimed in one of the preceding claims, the metal or the metal compound being present in the form of clusters on the fiber or surface of the matrix, in particular applied by evaporation and deposition, by a sputtering process or by chemical vapor deposition.
6. The wound covering (10) as claimed in one of the preceding claims, the substance having a mean particle size of 5 to 100 nm.
7. The wound covering (10) as claimed in one of the preceding claims, the substance being present in a layer having a mean thickness of 5 to 100 nm.
8. The wound covering (10) as claimed in one of the preceding claims, the substance being present in an amount which is antimicrobially active on thorough soaking of the matrix (12) with a liquid in the matrix (12).
9. The wound covering (10) as claimed in one of the preceding claims, the polymer being a polymer decreasing the adhesion of bacteria, preferably gram-negative bacteria or staphylococci, in particular *Staphylococcus epidermidis*, to the fiber or matrix.
10. The wound covering (10) as claimed in one of the preceding claims, the fiber or the surface of the matrix (12) being a fiber or surface coated with the polymer by means of plasma polymerization.
11. The wound covering (10) as claimed in claim 10, the polymer being a polymer oxidized after plasma polymerization.
12. The wound covering (10) as claimed in one of the preceding claims, the polymer being formed from monomers based on acrylic acid or from monomers based on siloxane, in particular hexamethyldisiloxane.
13. The wound covering (10) as claimed in one of the preceding claims, the polymer being present in a layer having a mean thickness of 5 to 500 nm.
14. The wound covering (10) as claimed in one of the preceding claims, the substance being present in an amount in which an amount of active compounds not acting cytotoxically on a wound in the application case is formed and/or released by the substance.
15. The wound covering (10) as claimed in one of the preceding claims, substances assisting wound healing, in particular growth factors, being bound to the matrix (12).
16. The wound covering (10) as claimed in one of the preceding claims, the matrix (12) being thoroughly soaked or impregnated with a liquid assisting wound healing, in particular an acidic liquid or a liquid comprising nutrients

assisting wound healing.

17. The wound covering (10) as claimed in one of the preceding claims, the film (14) being transparent, at least in places.

5      18. The wound covering (10) as claimed in one of the preceding claims, the wound covering being transparent to light, in particular UV light, IR light or NIR light.

10     19. The wound covering (10) as claimed in one of the preceding claims, the wound covering comprising an indicator, in particular a pH indicator.

15     20. The wound covering (10) as claimed in claim 19, the indicator being a sensor, in particular a biosensor.

21. The wound covering as claimed in claim 20, the sensor being a conductive polymer which changes its conductivity depending on the state of the wound or wound covering.

15     22. The wound covering (10) as claimed in one of claims 19 to 21, the indicator being an indicator indicating the liquid content of the matrix (12).

20     23. The wound covering (10) as claimed in claim 19 to 21, the indicator being an indicator indicating the degree and/or type of a microbial contamination of the matrix (12) or of the wound.

24. The wound covering (10) as claimed in claim 19 to 21, the indicator being an indicator indicating an inflammatory status of the wound.

25     25. A process for the production of a wound covering (10) as claimed in one of the preceding claims, having the following steps:

- making available of an absorbent matrix (12),
- making available of a gas-permeable but liquid-impermeable film (14),
- application of a self-adhesive first area (16) on or to the film (14) and
- connection of the absorbent matrix (12) to the film in a second area (17) of the film (14),
- the first area surrounding the second area (17) of the film (14),

35     by evaporation and deposition, a sputtering process or chemical vapor deposition first an antimicrobially active substance and then, by plasma polymerization, a polymer being deposited on the matrix (12) or a fiber forming the matrix (12).

### Revendications

40     1. Pansement (10) contenant une première couche formée par une matrice absorbante (12) et une substance efficace sur le plan antimicrobien, dans lequel la substance se présente liée chimiquement ou physiquement à une surface de la matrice (12), dans lequel la surface de la matrice y compris la substance est revêtue d'un polymère hydrophile, dans lequel le pansement (10) contient une seconde couche liée à la matrice (12) et formée par une feuille (14) perméable au gaz mais imperméable au fluide et présente une première zone autocollante (16), dans lequel la matrice (12) est reliée avec la feuille (14) dans une seconde zone (17) et la première zone est une zone de la feuille (14) qui entoure la seconde zone (17), dans lequel le pansement (10) peut être collé au moyen de la première zone autocollante sur une peau humaine ou animale, dans lequel est formé un espace interne étanche au fluide contenant la matrice (12) et pouvant être rempli d'un fluide, et dans lequel la substance est un métal ou un composé métallique.

45     2. Pansement (10) selon la revendication 1, dans lequel la matrice (12) présente au moins une fibre ou est formée d'au moins une fibre, et la surface de la matrice (12) à laquelle est liée la substance est une surface de la fibre.

50     3. Pansement (10) selon l'une des revendications précédentes, dans lequel la substance est exclusivement liée au niveau de la surface de la matrice ou de la fibre.

55     4. Pansement (10) selon l'une des revendications précédentes, dans lequel la substance est sélectionnée dans un groupe composé de l'argent, du cuivre et du zinc, ou dans un mélange d'argent, de cuivre et de zinc, ou dans un